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NEW DATA ON THE CENTIPEDE FAUNA (MYRIAPODA: CHILOPODA) OF KOSTANAY REGION, KAZAKHSTAN

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Summary. The centipede fauna of the Kostanay Region of Kazakhstan consists of 10 species from 6 genera, 4 families and 3 orders. *Lithobius lucifugus* L. Koch, 1862 is new to the fauna of Kazakhstan. Five species, *Scutigera coleoptrata* (Linnaeus, 1758), *Lithobius forficatus* (Linnaeus, 1758), *L. crassipes* L. Koch, 1862, *Disphaerobius loricatus* (Sseliwanoff, 1881), and *Polyporogaster porosa* (Sseliwanoff, 1881), as well as families Scutigeridae (genus *Scutigera* Lamarck, 1801) and Himantariidae (genus *Polyporogaster* Verhoeff, 1899) are recorded from the Kostanay Region for the first time.

Key words: Geophilidae, Lithobiidae, Scutigeridae, fauna, new records, Kostanay Region, Northern Kazakhstan.

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Резюме. В фауне губоногих многоножек Костанайской области Казахстана выявлено 10 видов из 6 родов, 4 семейств и 3 отрядов. Впервые для Казахстана приводится *Lithobius lucifugus* L. Koch, 1862. Пять видов [*Scutigera coleoptrata* (Linnaeus, 1758), *Lithobius forficatus* (Linnaeus, 1758), *L. crassipes* L. Koch, 1862, *Disphaerobius loricatus* (Sseliwanoff, 1881) и *Polyporogaster porosa* (Sseliwanoff, 1881)], а также семейства Scutigeridae (род *Scutigera* Lamarck, 1801) и Himantariidae (род *Polyporogaster* Verhoeff, 1899) впервые указываются для Костанайской области.

INTRODUCTION

The fauna of centipedes (Myriapoda: Chilopoda) of northern Kazakhstan is still poorly studied. Only four species (*Geophilus proximus*, *Hessebius multicalcaratus*, *H. plumatus* and *Lithobius curtipes*) has been recorded from steppe landscapes and birch-aspen forests (Bragina, 2005, 2012, 2016). New records of centipedes from the Kostanay Region are given in present paper.

MATERIAL AND METHODS

Materials examined were collected in Kostanay Region of Kazakhstan in 2008–2018 by Dr. Tatyana M. Bragina and detailed by Dr. Gyulli Sh. Farzalieva (Lithobiomorpha) and Yurii V. Dyachkov (Geophilomorpha, Scutigeromorpha). Specimens were collected by hand or by plastic ground pitfall traps with ethylene glycol as a preserve fluid, or by soil-zoological samples in different areas of the region. Mainly the stationary researches were done in the territory around Kostanay town (53°N, 63°E), in the Naurzum Reserve (moderately-dry and dry steppes, aspen-birch and pine forests, 51°N, 64°E) and in the Altyn Dala Reserve (desert steppes, 50°N, 64°E). Studied material is deposed in the collection of the Perm State University, Russia (PSU) and the Kostanay State Pedagogical Institute (Kazakhstan).

LIST OF THE SPECIES

Order Scutigeromorpha Pocock, 1895

Family Scutigeridae Gervais, 1837

Genus *Scutigera* Lamarck, 1801

***Scutigera coleoptrata* (Linnaeus, 1758)**

MATERIAL EXAMINED**. Kostanay Region**: Naurzum District, Naurzum Reserve, Naurzum site, inspector's house "Garden", 04.V 2014, 1 ex.; Karamendy Village, 20.VI 2017, 1 juv.; same place, 30.VII 2017, 1♀; Kostanay town, 17.V 2014, 1♂, 1♀; same locality, in the flat, 20.II 2017, 1♀; in the house, 15.V 2017, 1♂, 2♀; same locality, 15.V 2017, 1♂, 1♀; same locality, in the house, 31.III 2017, 1♂; Zarechnone Village, garden, soil trap, 26.VII 2018, 1♀; Kamysty District, Kamysty Village, 18.IV 2017, 2♂, 1♀; Denisovskyi District, Vyatsky Village, near Ayat River, 04.V 2014, 1 juv.; Amangeldy District, Amangeldy Village, 16.V 2017, 1♂.

DISTRIBUTION. Cosmopolitan species (Edgecombe, 2011). Recorded from the East Kazakhstan Region (Dyachkov *et al*., 2016); new to the Kostanay Region.

Order Lithobiomorpha Pocock, 1895

Family Lithobiidae Newport, 1844

Subfamily Lithobiinae Newport, 1844

Genus *Lithobius* Leach, 1814

***Lithobius* (*Monotarsobius*) *curtipes* C.L. Koch, 1847**

MATERIAL EXAMINED. **Kostanay Region**: Kostanay District, Stoun (Kamennoye) Lake, birch forest, in litter, 16.V 2017, 6♂, 5♀, 1♂/♀, 3 agenitalis.

DISTRIBUTION. Trans-Palaearctic polyzonal species: from Europe to Western Asia, Siberia and Mongolia (Zalesskaja, 1978; Farzalieva & Esyunin, 2008). Kazakhstan: Kostanay and West Kazakhstan regions (Bragina, 2012; Vsevolodova-Perel, 2009; Dyachkov, 2019).

***Lithobius* (*Lithobius*) *forficatus* (Linnaeus, 1758)**

MATERIAL EXAMINED. **Kostanay Region**: Kostanay town, near Tobol River, 10.VI 2008, 1♀.

DISTRIBUTION. Holarctic polyzonal species (Zalesskaja, 1978). Kazakhstan: East Kazakhstan, Almaty and Kyzylorda regions (Dyachkov *et al*., 2016; Dyachkov, 2019); new to the Kostanay Region.

***Lithobius* (*Lithobius*) *lucifugus* L. Koch, 1862**

MATERIAL EXAMINED. **Kostanay Region**: Altynsarin District, Arakaragai pine forest, in the litter, 11.VII 2014, 1♀; Kostany District, Aleksandrovka Village, 12.IV 2017, 1♂ (PSU-870).

DISTRIBUTION. West-Palaearctic subboreal species: Europe (including European part of Russia, Urals), synanthropic in Western Siberia (Zalesskaja, 1978; Farzalieva & Esyunin, 2008; Nefediev *et al.*, 2016). This species is new to the fauna of Kazakhstan.

***Lithobius* (*Monotarsobius*) *crassipes* L. Koch, 1862**

MATERIAL EXAMINED. **Kostanay Region**: Kostanay District, Stoun (Kamennoye) Lake, birch forest, in the litter, 16.V 2017, 1♂ (PSU-869); Kostanay town, in the flat, 15.V 2017, 1 ♂.

DISTRIBUTION. Europe (including Russia: European part and Western Siberia), N Africa, Western Asia, introduced in Taiwan and USA (Zalesskaja, 1978; Nefediev *et al.*, 2016). Kazakhstan: East Kazakhstan Region (Dyachkov *et al.*, 2016); new to the Kostanay Region.

Subfamily Pterygoterginae Verhoeff, 1933

Genus *Disphaerobius* Attems, 1926

***Disphaerobius loricatus* (Sseliwanoff, 1881)**

MATERIAL EXAMINED. **Kostanay Region**: Amangeldy District, Altyn Dala Reserve, Ulyzhilanshik site, near destroyed Rakhmet Village, bank of the river Uly-Zhilanshik, plant association with *Anabasis salsa*, pitfall traps, 49°16′ N, 65°14′ E, 04.VII 2013, 1♂; same locality, under shelter, 07.V 2014, 1♂ (PSU-871); same locality, under shelter, 07.V 2014, 1♂.

DISTRIBUTION. Kazakhstan: Aktobe, East Kazakhstan and Almaty regions; Russia: Orenburg Region (Farzalieva & Zalesskaja, 2003; Farzalieva *et al*., 2017; Dyachkov, 2019). New to the Kostanay Region.

***Disphaerobius* sp.**

MATERIAL EXAMINED. **Kostanay Region**: Aulyekol District, Naurzum Reserve, Tersek, under the bones of a moose on the *Stipa lessingiana* steppe, 03.V 2014, 1♂ (PSU-689, slide-22).

REMARKS. Morphologically this specimen is similar to *D. loricatus*, but differs by non-modified tergites (*D. loricatus* with serrate and broadened tergites).

Genus *Hessebius* Verhoeff, 1941

***Hessebius multicalcaratus* Folkmanová, 1958**

MATERIAL EXAMINED. **Kostanay Region**: Karasu District, Karasu Village, under dry dung, 16.V 2013, 2♂, 2♀; Aulyekol District, Naurzum Reserve, Tersek, *Stipa lessingiana* steppe, 15.V 1998, 3 spec. (N.T. Zalesskaja det.).

DISTRIBUTION. East-European steppe species. Volgograd and Rostov-on-Don Regions of Russia, the Dnepropetrovsk Region of Ukraine (Zalesskaja, 1978; Zuev & Evsyukov, 2016); border of the Orenburg Region of Russia and the Kostanay Region of Kazakhstan (Farzalieva & Esyunin, 2008: as *Hessebius* sp.). Kazakhstan: West Kazakhstan and Kostanay regions (Vsevolodova-Perel, 2009; Bragina, 2012, 2016; Dyachkov, 2019).

***Hessebius plumatus* Zalesskaja, 1978**

MATERIAL EXAMINED. **Kostanay Region**: Aulyekol District, Naurzum Reserve, Tersek, the *Stipa lessingiana* steppe, 1.VII 1998, 2 ex. (N.T. Zalesskaja det.).

DISTRIBUTION. Kyrgyzstan, Tajikistan (Zalesskaja, 1978) and Kazakhstan: Kostanay (Bragina, 2012, 2016) and Almaty regions (Dyachkov, 2019: as *H.* cf *plumatus*).

Order Geophilomorpha Pocock, 1896

Family Geophilidae Leach, 1816

Genus *Geophilus* Leach, 1814

***Geophilus proximus* C.L. Koch, 1847**

MATERIAL EXAMINED. **Kostanay Region**: Auliekol District, Naurzum Reserve, Tersek, virgin *Stipa lessingiana* steppe, in the soil, 2♀ (N.T. Zalesskaya det.); same locality, in soil (0–10 cm), 26.V 2018, 2♀, 1 juv. Kostanay District Alexandrovka Village, 53°33′ N, 63°52′ E, 14.IV 2013, 1♀; Stoun (Kamennoye) Lake, birch forest, in litter, 53°12' N, 63°44' E, 16.V 2017, 2♀; same locality, lakeside, 53°12' N, 63°44' E, 16.V 2017, 10♀; Zatobolsk Village, 53°12' N, 63°41' E, 14.V 2017, 2♀; Zarechnone Village, garden, soil trap, 15.VII 2017, 1♀; same locality, 17.IV 2018, 6♀, 2 fragm.; Kostanay town, in the garden, 53°13' N, 63°37' E, 07.V 2017, 3 ♀, 3 juv.; Amangeldy District, Amangeldy Village, 50°11′ N, 65°11′ E, 16.V 2017, 1♀; Karabalyk District, Ozernoye Village, in the soil, 53°27' N, 63°19' E, 12.V 2017, 5♀; Auliekol District, Naurzum Reserve, Tersek, *Tríticum* field near virgin *Stipa lessingiana* steppe, in the soil (20–30 cm), 18.V 2018, 3♀.

DISTRIBUTION. West-Palearctic polyzonal species (Barber & Jones, 1999; Barber, 2009; Nefediev *et al*., 2017). Kazakhstan: East Kazakhstan, Karaganda, West Kazakhstan and Kostanay regions (Dyachkov & Tuf, 2019).

Family Himantariidae Bollman, 1893

Genus *Polyporogaster* Verhoeff, 1899

***Polyporogaster porosa* (Sseliwanoff, 1881)**

MATERIAL EXAMINED. **Kostanay Region**: Amangeldy District, Altyn Dala Reserve, Ulyzhilanshik site, near destroyed Rakhmet Village, steppe, grazing site, 04.VII 2013, 1♀.

REMARKS. Central Asian species. Uzbekistan (Sseliwanoff, 1881; Lignau, 1929) and Kazakhstan: Mangystau, Kyzylorda, Turkistan and Almaty regions (Dyachkov, 2020). This species, the genus *Polyporogaster* and family Himantariidae are recorded from the Kostanay Region for the first time.

CONCLUSION

The centipede fauna of the Kostanay Region (Kazakhstan) comprises at least 10 species from 6 genera, 4 families and 3 orders. *Lithobius lucifugus* is new to the fauna of Kazakhstan. Five species, *Scutigera coleoptrata*, *Lithobius forficatus*, *L. crassipes*, *Disphaerobius loricatus*, and *Polyporogaster porosa*, as well as families Scutigeridae (genus *Scutigera* Lamarck, 1801) and Himantariidae (genus *Polyporogaster* Verhoeff, 1899) are recorded from the Kostanay Region for the first time.

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